Please amend the claims as follows:

1. (Currently Amended)   A method of encoding a plurality of input signals (l, r) to generate corresponding encoded data ~~(100)~~, the method comprising steps of:

(a)   processing, using a first processor, the input signals (l, r) to determine first parameters (φ2) describing at least one of relative phase difference and temporal difference between the signals (l, r), and applying these first parameters (φ2) to process the input signals to generate corresponding intermediate signals;

(b)   processing, using a second processor, the intermediate signals and/or the input signals (l, r) to determine second parameters describing rotation of the intermediate signals required to generate a dominant signal (m) and a residual signal (s), said dominant signal (m) having a magnitude or energy greater than that of the residual signal (s), and applying these second parameters to process the intermediate signals to generate the dominant (m) and residual (s) signals;

(c)   quantizing, in a quantizer, the first parameters, the second parameters, and encoding at least a part of the dominant signal (m) and the residual signal (s) to generate corresponding quantized data; and

(d)   multiplexing, using a multiplexer, the quantized data to generate the encoded data ~~(100)~~.

2. (Currently Amended) A The method according toas claimed in Claim 1, wherein only a part of the residual signal (s) is included in the encoded data (100).

3. (Currently Amended) A The method according toas claimed in Claim 2, wherein the encoded data also includes one or more parameters indicative of which parts of the residual signal are included in the encoded data (100).

4. (Currently Amended) A The method according toas claimed in Claim 1, wherein steps (a) and (b) are implemented in the first second processors by complex rotation with the input signals (l[n],r[n]) represented in the frequency domain (l[k], r[k]).

5. (Currently Amended) A The method according toas claimed in Claim 4, wherein steps (a) and (b) are performed independently on sub-bands of the input signals (l[n], r[n]).

6. (Currently Amended) A The method according toas claimed in Claim 5, wherein other sub-bands not encoded by the method are encoded using alternative coping techniques.

7. (Currently Amended) A The method according toas claimed in Claim 1, wherein, in step (c), said method includes a step of manipulating the residual signal (s) by discarding perceptually

non-relevant time-frequency information present in the residual signal (s), said manipulated residual signal (s) contributing to the encoded data ~~(100)~~ and said non-relevant information corresponding to selected portions of a spectro-temporal representation of the input signals (l, r).

8. (Currently Amended)   ~~A~~ The method ~~according to~~as claimed in Claim 1, wherein the second parameters in step (b) are derived by minimizing the magnitude or energy of the residual signal (s).

9. (Currently Amended)   ~~A~~ The method ~~according to~~as claimed in Claim 1, wherein the second parameters are represented by way of inter-channel intensity difference parameters and coherence parameters (IID, ρ).

10. (Currently Amended)   ~~A~~ The method ~~according to~~as claimed in Claim 1, wherein the second parameters are represented by way of a rotation angle α and an energy ratio of the dominant (m) and residual (s) signals.

11. (Currently Amended)   ~~A~~ The method ~~according to~~as claimed in Claim 1, wherein, in steps (c) and (d), the encoded data is arranged in layers of significance, said layers including a base layer conveying the dominant signal (m), a first enhancement layer including first and/or second parameters corresponding to stereo

imparting parameters, a second enhancement layer conveying a representation of the residual signal (s).

12. (Currently Amended) A The method according to as claimed in Claim 11, wherein the second enhancement layer is further subdivided into a first sub-layer for conveying most relevant time-frequency information of the residual signal (s) and a second sub-layer for conveying less relevant time-frequency information of the residual signal (s).

13. (Currently Amended) An encoder (10; 300; 500) for encoding a plurality of input signals (l, r) to generate corresponding encoded data (100), the encoder comprising:

(a) first processing means (20; 310; 510) for processing the input signals (l, r) to determine first parameters (φ2) describing at least one of relative phase difference and temporal difference between the input signals (l, r), the first processing means (20; 310; 510) being operable to apply these first parameters (φ2) to process the input signals to generate corresponding intermediate signals;

(b) second processing means (30, 40, 50, 60; 320; 340; 520, 530, 540, 550) for processing the intermediate signals and/or the input signals (l, r) to determine second parameters describing rotation of the intermediate signals required to generate a dominant signal (m) and a residual signal (s), said dominant signal

(m) having a magnitude or energy greater than that of the residual signal (s), the second processing means being operable to apply these second parameters to process the intermediate signals to generate the dominant (m) and residual (s) signals;

(c)   quantizing means ~~(70; 360; 560)~~ for quantizing the first parameters ($\varphi2$), the second parameters (α; IID, ρ), and at least part of the dominant signal (m) and the residual signal (s) to generate corresponding quantized data; and

(d)   multiplexing means for multiplexing the quantized data to generate the encoded data ~~(100)~~.

14.   (Currently Amended)   ~~An~~ The encoder ~~according to~~as claimed in Claim 13, including processing means for manipulating the residual signal (s) by discarding perceptually non-relevant time-frequency information present in the residual signal (s), said manipulated residual signal (s) contributing to the encoded data ~~(100)~~ and said perceptually non-relevant information corresponding to selected portions of a spectro-temporal representation of the input signals.

15.   (Currently Amended)   ~~An~~ The encoder ~~according to~~as claimed in Claim 13, wherein the residual signal (s) is manipulated, encoded and multiplexed into the encoded data ~~(100)~~.

16.   (Currently Amended)   A method of decoding encoded data ~~(100)~~ to regenerate corresponding representations of a plurality of input

signals (l', r'), said input signals (l, r) ~~being~~ having been
previously encoded to generate said encoded data ~~(100)~~, the method
comprising steps of:

(a)   de-multiplexing, using a demultiplexer, the encoded data
(100) to generate corresponding quantized data;

(b)   processing, using a first processor, the quantized data to
generate corresponding first parameters ($\varphi2$), second parameters (α;
IID, ρ), and at least a dominant signal (m) and a residual signal
(s), said dominant signal (m) having a magnitude or energy greater
than that of the residual signal (s);

(c)   rotating, using a second processor, the dominant (m) and
residual (s) signals by applying the second parameters (α; IID, ρ)
to generate corresponding intermediate signals; and

(d)   processing, using a third processor, the intermediate
signals by applying the first parameters ($\varphi2$) to regenerate
representations of said input signals (l, r), the first parameters
($\varphi2$) describing at least one of relative phase difference and
temporal difference between the signals (l, r).

17.   (Currently Amended)   ~~A~~ The method ~~according to~~ as claimed in
Claim 16, including in step (b) a further step of appropriately
supplementing missing time-frequency information of the residual
signal (s) with a synthetic residual signal derived from the
dominant signal (m).

18. (Currently Amended)   A The method according toas claimed in
Claim 16, wherein the encoded data includes parameters indicative
of which parts of the residual signal (s) are encoded into the
encoded data.

19. (Currently Amended)   A The method according toas claimed in
Claim 16, wherein the decoder decodes parts of the encoded signal
(100) requiring supplementation by detecting empty areas of the
encoded signal (100) when represented in a time/frequency plane.

20. (Currently Amended)   A The method according toas claimed in
Claim 16, wherein the decoder decodes parts of the encoded signal
(100) requiring replacement or supplementation by detecting data
parameters indicative of empty areas.

21. (Currently Amended)   A decoder (200; 400; 600) for decoding
encoded data (100) to regenerate corresponding representations of a
plurality of input signals (l', r'), said input signals (l, r)
being having been previously encoded to generate the encoded data,
the decoder (200; 400; 400) comprising:
(a)   de-multiplexing means (210; 410; 610) for de-multiplexing
the encoded data (100) to generate corresponding quantized data;
(b)   first processing means for processing the quantized data
to generate corresponding first parameters (φ2), second parameters
(α; IID, ρ), and at least a dominant signal (m) and a residual

signal (s), said dominant signal (m) having a magnitude or energy
greater than that of the residual signal (s);

(c)   second processing means for rotating the dominant (m) and
residual (s) signals by applying the second parameters (α; IID, ρ)
to generate corresponding intermediate signals; and

(d)   third processing means for processing the intermediate
signals by applying the first parameters (φ2) to generate
corresponding input signals (l, r), the first parameters (φ2)
describing at least one of relative phase difference and temporal
difference between the signals (l, r).

22. (Currently Amended)   A The decoder ~~according to~~as claimed in
Claim 21, wherein the second processing means is operable to
generate a supplementary synthetic residual signal derived from the
decoded dominant signal (m) ~~(630)~~ for providing information missing
from the decoded residual signal (s).

23. (Currently Amended)   A The decoder ~~according to~~as claimed in
Claim 22, wherein the first processing means is operable to
determine which parts of the residual signal (s) have been decoded
for ~~synthesising~~ synthesizing missing non-decoded parts of the
residual signal for generating substantially the entire residual
signal (s).

24. (Cancelled).

25. (Currently Amended)   ~~Encoded~~ A computer-readable medium having encoded data ~~(100) at least one of~~ recorded ~~on a data carrier and communicable via a communication network~~thereon, said encoded data ~~(100)~~ comprising a multiplex of quantizing first parameters, quantized second parameters, and quantized data corresponding to at least a part of a dominant signal (m) and a residual signal (s), wherein the dominant signal (m) has a magnitude or energy greater than the residual signal (s), said dominant signal (m) and said residual signal (s) being derivable by rotating intermediate signals according to the second parameters, said intermediate signals being generated by processing a plurality of input signals to compensate for relative phase and/or temporal delays therebetween as described by the first parameters.

26. (Currently Amended)   ~~Software for executing~~A computer-readable medium having a program recorded thereon, said program causing computing hardware to execute the method ~~of~~as claimed in Claim 1 ~~on computing hardware~~.

27. (Currently Amended)   ~~Software for executing~~A computer-readable medium having a program recorded thereon, said program causing computing hardware to execute the method ~~of~~as claimed in Claim 16 ~~on computing hardware~~.